

The following closely allied species has long stood in my collection as *H. Planorbis*, Lesson; on mature consideration, it appears deserving of separation.

*Helix Cantoriana*, Bens., n. sp.

*H. testa* mediocriter umbilicata, tenui, depressa, orbiculato-conoidea, lenticulari, oblique subarcuato-striata, subtus læviore, utrinque lineis distincte incisus remotiusculis spirilibus decussata, fusco-cornea, translucente, nitidula; spira parum elevata, depresso-conoidea, apice nucleato, obtuso, rubello, sutura impressa, submarginata; anfractibus  $5\frac{1}{2}$ , convexiusculis, ultimo carina mediana obtusiuscula utrinque compressa munito, subtus convexo; apertura obliqua, subquadrato-lunari; peristomate tenui, acuto; umbilico infundibuliformi.

Diam. major 10, minor 9, axis  $3\frac{1}{2}$  mill.

Habitat in insula Pulo Sung-Sung, prope Pulo Pinang. Detexit Dr. J. E. Cantor.

A single specimen was found on the little island in question by the late zealous zoologist Dr. Cantor. It is certainly distinct from *H. Sanis*; and the peculiar sculpture, independently of other characters, affords good ground for distinguishing it from the recorded species of the same group.

Including two *Spiraxes*, one of which is not in a sufficiently perfect state for description; a *Bulimus*, which appears to be the young of the widely spread *B. gracilis*, Hutton; a *Helix* as yet undetermined; an *Auricula*; a *Melampus*, and a *Pythia*, we have now sixteen species of land-shells from the Andaman Islands.

Cheltenham, Dec. 21, 1860.

XII.—On three new *Trachinoid* Fishes.

By Dr. ALBERT GÜNTHER.

[Plate X. A.]

THE family of the *Trachinidæ*, Gthr., has been established for those Acanthopterosus Fishes which have the spinous portion of their dorsal fin much less developed and shorter than the soft, the anal fin similarly developed to the soft dorsal, and the ventrals composed of one spine and five rays. Their gill-openings are wide, and the caudal portion of their vertebral column is formed by many more vertebræ than the abdominal\*.

Such are the positive characters by which they may be easily distinguished from the *Sciænidæ*, *Carangidæ*, *Blenniidæ*, *Gobiidæ*, *Trichonotidæ*, &c.; whilst the negative character, that of the absence of an infraorbital bone joined to the præoperculum,

\* Günth. Acanthopt. Fishes, ii. p. 225.

distinguishes them from the *Cottina*. Other negative characters, as for instance the absence of finlets behind the dorsal and anal, the entire absence or the small number of pyloric appendages, separate them from some of the Scomberoid genera, which otherwise would appear to have a great affinity to them.

I formerly divided this family into four groups: *Uranoscopina*, *Trachinina*, *Pinguipedina*, and *Pseudochromides*\*.

The fourth of these groups (*Pseudochromides*) is not identical with that so called by Müller, all those genera having been excluded which have the ventral fins not fully developed. But even then the characters of the group appear to me to be too wide to form a natural union of fishes, since I have found that *Chænichthys*, Richards., has the lateral line interrupted, like *Pseudochromis*, *Notothenia*, &c., and therefore should be placed in the same group with them. If, on the other hand, we separate again those *Pseudochromides* which have only one dorsal fin (*Opisthognathus*, *Pseudochromis*, *Cichlops*, *Pseudoplesiops*) from those which have two (*Notothenia*, *Harpagifer*, *Chænichthys*), two groups will be established, well defined even by their geographical distribution.

We divide, therefore, the family of the *Trachinidæ* into the following groups:—

Eyes on the upper surface of the head; lateral line continuous .....	a. <i>Uranoscopina</i> .
Eyes more or less lateral; lateral line continuous; no larger tooth on the posterior portion of the intermaxillary .....	b. <i>Trachinina</i> .
Eyes lateral; a larger tooth on the posterior portion of the intermaxillary .....	c. <i>Pinguipedina</i> .
Lateral line interrupted, or not continued to the caudal fin; one dorsal. (Seas between the Tropics.)	d. <i>Pseudochromides</i> .
Lateral line interrupted; two dorsal fins. (Antarctic Seas.) .....	e. <i>Nototheniina</i> .

I add to the known species of this family, *first*, a new genus of *Uranoscopina*, from New Zealand.

#### CRAPATALUS.

Form of the head as in *Leptoscopus*, entirely covered with soft skin; cleft of the mouth approaching the vertical line; eye on the upper side of the head; lips fringed. Scales cycloid, of moderate size. One continuous dorsal; ventrals jugular; pectoral rays branched. Minute villiform teeth in the jaws and on the pharyngeal bones, none on the palate; no interior or exterior filament; opercles without external spines; gill-opening

\* The genus *Heterostichus*, which has been placed by its describer in a family of *Trachinidæ* widely different from that so called by myself, proves to be a truly Blennioid fish, closely allied to *Myzodes* and *Clinus*.

very wide, partially open above. Six branchiostegals, four gills, pseudobranchiæ.

New Zealand; probably in the sea.

*Crapatalus Novæ Zelandiæ.* (Pl. X. fig. A.)

D. 35. A. 39. C. 13. P. 21. V. 1/5. L. lat. 60. L. transv. 7/7.

*Scales on the neck before the dorsal fin considerably smaller than those on the sides of the body.*

*Description.*—The head is broad, depressed, flat above, and rounded on the sides; its greatest width is four-fifths of its length, and its depth five-eighths of the same. The snout is very short, about as long as the diameter of the eye, which is one-sixth of the length of the head. Cleft of the mouth subvertical; the lips are serrated and fringed, having the appearance of a series of teeth. Nostrils two, the anterior produced into a short tube. The width of the interorbital space equals the diameter of the eye. The gills are widely cleft, and their membrane is only slightly contiguous on the throat; the upper margin of the operculum is fringed; there is an oblong membranaceous flap on each side of the isthmus, which serves for closing a part of the gill-opening.

The length of the head is contained four times and one-third in the total length, the height of the body nearly seven times. The trunk is subcylindrical; the tail, which is considerably elongate, compressed and tapering posteriorly. The vent is much advanced forwards, so that its distance from the snout is contained three times and a half in the total length. The anterior part of the trunk is covered with small scales, and the space behind the pectorals and that before and between the ventrals is naked. The rays of the dorsal and anal fins appear to be simple, not branched; this, however, cannot be satisfactorily ascertained, owing to their indifferent state of preservation. The *dorsal* fin commences behind the vertical from the origin of the anal, at a distance from the occiput which equals that of the latter from the snout, and terminates immediately before the root of the caudal; it appears to be of nearly uniform height, but much lower than the body. The *anal* fin commences immediately behind the vent, extending backwards as far as the dorsal; it gradually becomes lower posteriorly. The *caudal* fin is subtruncated, one-ninth of the total length, and has the middle rays divided. The *pectoral* fin extends to the vertical from the eleventh dorsal ray; its rays are branched, and the lower ones become gradually longer to the sixth upper one, which is the longest. The *ventral* fins are composed of one very distinct spine and five branched rays; they are rounded, somewhat distant from each other, and extend to the fourth anal ray.

The specimen, which is discoloured, was brought from New Zealand, and deposited in the British Museum.

	lines.
Total length .....	41
Length of the head .....	$9\frac{1}{2}$
Greatest width of the head .....	$7\frac{1}{2}$
Greatest depth of the head .....	6
Greatest depth of the body .....	6
Diameter of the eye .....	$1\frac{1}{2}$
Distance of the vent from the snout .....	12
Length of the pectoral fin .....	9
Length of the ventral fin .....	6
Length of the caudal fin .....	$4\frac{1}{2}$

The *second* new species belongs to the *Trachinina*.

*Aphritis gobio.*

B. 6. D.  $7/22$ . A. 22. C. 18. P. 16. V.  $1/5$ . L. lat. 65–70.

The *maxillary* bone extends beyond the vertical from the centre of the eye.

Port Famine.

This species is allied to *Aphritis Durvillii*, described by Cuvier from an apparently small specimen from the fresh waters of Van Diemen's Land. This, however, is said to have the cleft of the mouth rather narrow, whilst in our species it is wide; both differ, besides, in the number of the fin-rays.

The general aspect of the fish is cottoid; the head, however, is considerably more elevated, its depth below the interorbital portion being one-half of its length, which is contained three times and a half in the total. The snout is of moderate extent, twice as long as the eye, with the cleft of the mouth oblique, and with the lower jaw somewhat prominent. Jaws, vomer, and palatine bones armed with broad bands of villiform teeth. The interorbital space is very concave, its width being much less than that of the orbit, which is one-eighth of the length of the head, and nearly one-third of the depth of the head below the orbit. The operculum terminates in an obtuse, stiff spine. The distance of the anterior dorsal from the occiput is the same as that of the posterior from the caudal fin; both are of moderate and nearly equal height. Caudal rounded. The anal commences and terminates behind the opposite fin. Pectoral rounded, extending to the vertical from the third dorsal ray. Ventrals jugular, nearly as long as the pectoral.

The head is entirely scaly, except on the mandibula; there are even some scales on the maxillary. The scales are rather irregularly arranged, cycloid, and those above the lateral line have smaller scales on their base.

The colour now is uniform brown.

There are two specimens in the British Museum: one is a skin, from the old museum of the Zoological Society; the other is a stuffed specimen,  $17\frac{1}{2}$  inches long, from the same collection from Port Famine which contained *Chænichthys esox*.

Of the genus *Chænichthys* (*Nototheniina*) only one species was known. We add a second:—

*Chænichthys esox*.

B. 7. D. 10/33–34. A. 34. C. 30. P. 21. V. 1/5.

*Snout without a spine anteriorly. Lateral line smooth, without granulated plates.*

Port Famine.

This species is similar to *Ch. rhinocerus*, Richards., from which it may be readily distinguished by the characters mentioned. The general form of the head is the same as in the other species, and its length is contained three times and a third in the total length. The maxillary extends nearly to below the middle of the eye; both the jaws are armed with cardiform teeth, the palate being entirely smooth. The bony striæ of the operculum are differently arranged from those in *Ch. rhinocerus*, and do not terminate in very prominent spines; the centre from which they radiate is near the upper anterior angle of the operculum; two run downwards towards the suboperculum, three towards the extremity of the operculum (the upper one being bifurcate), and the last ascends upwards towards the suprascapula. The anterior dorsal fin commences at a small distance from the occiput, and is longer than high, none of the flexible spines being produced; this, however, cannot constitute a specific difference from *Ch. rhinocerus*, as long as we are ignorant whether the sexes of the fishes of this genus show any external differences. The soft dorsal commences immediately behind the spinous, is about as high, and terminates at some distance from the caudal; the latter fin appears to be subtruncated. The anal commences a little behind the soft dorsal, and terminates in the same vertical. The pectoral is broad, extending to the vertical from the third dorsal ray; the upper portion of its posterior margin is subtruncated, the lower rounded. The ventrals are jugular, and rather longer than the pectoral.

The skin is entirely smooth, the lateral line being formed by small tubules, which, in dried specimens, are very distinct. It ascends in a gentle curve towards the back, running close to the base of the soft dorsal and terminating opposite to the extremity of that fin. The second or lower portion of the lateral line

commences below the last fourth of the dorsal fin, running along the middle of the tail towards the caudal.

The colour is now a dirty yellowish, with brown blotches.

The single stuffed specimen, brought by Capt. King from Port Famine, is  $12\frac{1}{2}$  inches long.

I subjoin, for comparison, the diagnosis of

*Chenichthys rhinoceratus.*

Richards. Voy. Ereb. & Terr. Fishes, p. 13, pl. 6. figs. 1-3  
(ventrals too short).

B. 7. D. 7/34-35. A. 33.

*A hook-like spine anteriorly on the upper surface of the head.  
Lateral line with a series of granulated scales.*

XIII.—*On certain Coleoptera from the Island of St. Vincent.*

By T. VERNON WOLLASTON, M.A., F.L.S.

IN the Supplement to vol. xx. ser. 2. of the 'Annals of Natural History', I gave a brief notice of fifteen exponents of the Coleoptera which were captured by John Gray, Esq., and the Rev. Hamlet Clark, during a day's sojourn at St. Vincent (of the Cape de Verdes) in December 1856,—only eleven of which, however, I then attempted to determine precisely. But having lately received, through the kindness of Alexander Fry, Esq., the loan of various specimens which he has collected whilst touching at the same island on two subsequent occasions (amounting to twenty-three species, fourteen of which were not found by Messrs. Gray and Clark), and having likewise had the advantage of a few more (two of which were not included in either of the above-mentioned batches) picked up by my nephew F. W. Hutton, Esq., on the 11th of June, 1857, whilst on his voyage to Calcutta,—I have got together, in all, an assortment of thirty-two species, which I have just been examining somewhat carefully, with the intention of supplying a few critical remarks on them in the present paper.

So little being known of the insect-population of the Cape de Verdes, any contribution which may tend to elucidate even a modicum of the forms that prevail there cannot but be interesting; and when we consider the excessive barrenness of the group (to which all travellers bear most abundant testimony), I cannot but believe that the thirty-two species recorded below, from one of the smaller islands, may give some faint idea of the general character of the Coleoptera of that particular spot. As we might naturally anticipate, in such a dry and cindery region,